

Claims

WHAT IS CLAIMED IS:

1. A method comprising:
sampling pixels in a first region within a tool impression in a digital image to determine a first distribution of a pixel property of the pixels in the first region;
sampling pixels in a second region within the tool impression to determine a second distribution of the pixel property of the pixels in the second region; and
editing at least one pixel within the tool impression based on the first and second distributions.
2. The method of claim 1 wherein the editing operation comprises:
altering an editable pixel property of the at least one pixel.
3. The method of claim 1 wherein the editing operation comprises:
altering an editable pixel property of the at least one pixel, the editable pixel property being different than the sampled pixel property.
4. The method of claim 1 wherein the first and second regions represent differently-located subdivisions of the tool impression.
5. The method of claim 1 wherein the editing operation comprises:
editing the at least one pixel within the tool impression according to an edit profile based on the first and second distributions of the pixel property.

1 6. The method of claim 5 wherein the edit profile is determined by
2 classifying the pixel properties as a function of pixel property differences.

3 7. The method of claim 5 wherein the edit profile is determined by
4 classifying the pixel properties into at least two edit classes, each edit class
5 applying a different degree of an editing effect.

6 8. The method of claim 5 wherein the edit profile is determined by
7 classifying the pixel properties into at least two edit classes, each edit class
8 applying a different editing effect.

9 9. The method of claim 5 wherein the edit profile is determined by
10 classifying the pixel properties using blind signal separation.

11 10. The method of claim 5 wherein the edit profile is determined by
12 categorizing the pixel properties using a classifier.

13 11. The method of claim 5 wherein the edit profile is determined by
14 classifying the pixel properties using discriminant analysis.

15 12. The method of claim 5 wherein the edit profile is determined by
16 classifying the pixel properties using mixture modeling.

17 13. The method of claim 5 wherein the edit profile is determined by
18 classifying the pixel properties using Bayesian statistics.

19 14. The method of claim 5 wherein the edit profile is determined by
20 classifying the pixel properties using thresholds.

1 15. The method of claim 5 wherein the edit profile is determined by
2 classifying the pixel properties using property variance.

3 16. The method of claim 5 wherein the edit profile includes overlapping edit
4 classes, each edit class representing a different degree of editing effect.

5 17. The method of claim 5 wherein the edit profile includes overlapping edit
6 classes, each edit class representing a different type of editing effect.

7 18. The method of claim 5 wherein the edit profile designates an edit class
8 specifying a replacement value of an editable pixel property of the at least one
9 pixel.
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11 19. The method of claim 5 wherein the edit profile designates an edit class
12 specifying a transformation of an editable pixel property of the at least one pixel.
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14 20. The method of claim 1 wherein the editing operation comprises:
15 editing at least one pixel within each of the first region and the second
16 region of the tool impression based on the first and second distributions of the
17 pixel property.

18 21. The method of claim 1 wherein the pixel property is a composite pixel
19 property.
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1 22. The method of claim 1 wherein the pixel property is a multidimensional
2 pixel property.

3 23. The method of claim 1 wherein the operation of sampling pixels in the
4 first region comprises:
5 determining a property value for each of a plurality of pixels within the first
6 region.

7 24. The method of claim 1 further comprising:
8 determining location and dimensions of the tool impression within the
9 digital image.
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11 25. The method of claim 1 further comprising:
12 identifying the pixels in the first region within the tool impression of the
13 digital image; and
14 identifying the pixels in the second region within the tool impression of the
15 digital image.
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1 26. A computer program product encoding a computer program for
2 executing on a computer system a computer process, the computer process
3 comprising:

4 sampling pixels in a first region within a tool impression in a digital image
5 to determine a first distribution of a pixel property of the pixels in the first region;

6 sampling pixels in a second region within the tool impression to determine
7 a second distribution of the pixel property of the pixels in the second region; and

8 editing at least one pixel within the tool impression based on the first and
9 second distributions.

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11 27. The computer program product of claim 26 wherein the editing
12 operation comprises:

13 altering an editable pixel property of the at least one pixel.

14 28. The computer program product of claim 26 wherein the editing
15 operation comprises:

16 altering an editable pixel property of the at least one pixel, the editable
17 pixel property being different than the sampled pixel property.

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19 29. The computer program product of claim 26 wherein the first and second
20 regions represent differently-located subdivisions of the tool impression.

21 30. The computer program product of claim 26 wherein the editing
22 operation comprises:

23 editing the at least one pixel within the tool impression according to an edit
24 profile based on the first and second distributions of the pixel property.

1 31. The computer program product of claim 30 wherein the edit profile is
2 determined by classifying the pixel properties as a function of pixel property
3 differences.

4 32. The computer program product of claim 30 wherein the edit profile is
5 determined by classifying the pixel properties into at least two edit classes, each
6 edit class applying a different degree of an editing effect.

7 33. The computer program product of claim 30 wherein the edit profile is
8 determined by classifying the pixel properties into at least two edit classes, each
9 edit class applying a different editing effect.

10 34. The computer program product of claim 30 wherein the edit profile is
11 determined by classifying the pixel properties using blind signal separation.

12 35. The computer program product of claim 30 wherein the edit profile is
13 determined by categorizing the pixel properties using a classifier.

14 36. The computer program product of claim 30 wherein the edit profile is
15 determined by classifying the pixel properties using discriminant analysis.

16 37. The computer program product of claim 30 wherein the edit profile is
17 determined by classifying the pixel properties using mixture modeling.

18 38. The computer program product of claim 30 wherein the edit profile is
19 determined by classifying the pixel properties using Bayesian statistics.

20 39. The computer program product of claim 30 wherein the edit profile is
21 determined by classifying the pixel properties using thresholds.

1 40. The computer program product of claim 30 wherein the edit profile is
2 determined by classifying the pixel properties using property variance.

3 41. The computer program product of claim 30 wherein the edit profile
4 includes overlapping edit classes, each edit class representing a different degree of
5 editing effect.

6 42. The computer program product of claim 30 wherein the edit profile
7 includes overlapping edit classes, each edit class representing a different type of
8 editing effect.

9 43. The computer program product of claim 30 wherein the edit profile
10 designates an edit class specifying a replacement value of an editable pixel
11 property of the at least one pixel.

12 44. The computer program product of claim 30 wherein the edit profile
13 designates an edit class specifying a transformation of an editable pixel property of
14 the at least one pixel.

15 45. The computer program product of claim 26 wherein the editing
16 operation comprises:

17 editing at least one pixel within each of the first region and the second
18 region of the tool impression based on the first and second distributions of the
19 pixel property.

20 46. The computer program product of claim 26 wherein the pixel property is
21 a composite pixel property.

1 47. The computer program product of claim 26 wherein the pixel property is
2 a multidimensional pixel property.

3 48. The computer program product of claim 26 wherein the operation of
4 sampling pixels in the first region comprises:

5 determining a property value for each of a plurality of pixels within the first
6 region.

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8 49. The computer program product of claim 26 wherein the computer
9 process further comprises:

10 determining location and dimensions of the tool impression within the
11 digital image.

12 50. The computer program product of claim 26 wherein the computer
13 process further comprises:

14 identifying the pixels in the first region within the tool impression of the
15 digital image; and

16 identifying the pixels in the second region within the tool impression of the
17 digital image.

1 51. A system comprising:

2 a region sampling module that samples pixels in a first region within a tool
3 impression in a digital image to determine a first distribution of a pixel property of
4 the pixels in the first region and samples pixels in a second region within the tool
5 impression to determine a second distribution of the pixel property of the pixels in
6 the second region; and

7 an editing module that edits at least one pixel within the tool impression
8 based on the first and second distributions.
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